

**ENVIRONMENTAL ASSESSMENT
FOR THE
CHANGE OF MAINTENANCE OPERATIONS
AT PALM BEACH HARBOR AND PEANUT ISLAND
PALM BEACH COUNTY, FLORIDA**

1.0 PROJECT PURPOSE AND NEED

1.1 PROJECT LOCATION.

Peanut Island lies within the north-central area of Lake Worth Lagoon, in Section 34, Township 42 South, Range 43 East, Riviera Beach, Palm Beach County, Florida (Figure 1). Lake Worth Inlet and the Intracoastal Waterway (IWW) form the easterly and westerly boundaries of the island.

1.2 AUTHORITY.

The project is authorized under the 1996 Water Resources Development Act, as amended.

1.3 PURPOSE OF AND NEED FOR ACTION.

The purpose of the action is to change the scheduled winter maintenance dredging of Palm Beach Harbor to summer pipeline dredging and to offload dredge material from the southern end of Peanut Island, at the Port of Palm Beach dredged material storage area (DMSA). These changes would also realize secondary benefits such as maximum and economic utilization of dredge equipment, increase storage capacity for future dredge material disposal, nourish highly erodible shorelines, and create submerged aquatic habitat and/or essential fishery habitat.

1.4 AGENCY GOAL OR OBJECTIVE.

The goals and objectives of the proposed action are to:

- a. Provide material storage capacity for the local sponsor during the planned maintenance dredging of Palm Beach Harbor.
- b. Provide a maximum effort of resources to facilitate the environmental restoration of Peanut Island proposed under Section 1135 of the Water Resources Act of 1996, as amended. The proposed action would benefit Peanut Island environmental restoration with the removal of exotic vegetation at the southern end of the island, creation of wetland habitat and fishery/oyster reefs, and would improve area aesthetics by reconfiguring and lowering the existing DMSA containment berm.
- c. Change the scheduled winter hopper dredging of Palm Beach Harbor to summer pipeline dredging. This action would be cost-effective, allow maximum use and economic benefit of equipment while in the area performing work associated with the environmental restoration of Peanut Island.

1.5 RELATED ENVIRONMENTAL DOCUMENTS.

1.5.1 AUGUST 1997, SECTION 1135, ENVIRONMENTAL RESTORATION REPORT with EA, PEANUT ISLAND, PALM BEACH COUNTY, FLORIDA

The Jacksonville District Corps completed the Peanut Island Environmental Restoration Report March 2000. Coordination completed under Section 7 of the Endangered Species Act, Fish and Wildlife Coordination Act, and other mandated acts were also included in the report. Responses that were received to the March 2000 report provided helpful input and information relevant to aspects of this report.

1.5.2 JANUARY 1995, SECTION 1135, ENVIRONMENTAL RESTORATION REPORT, MUNYON ISLAND, PALM BEACH COUNTY, FLORIDA

The Jacksonville District Corps prepared an Environmental Assessment on the proposed environmental restoration project. In association with the 1995 Environmental Assessment, environmental coordination was completed under Section 7 of the Endangered Species Act, Fish and Wildlife Coordination Act and other mandatory acts. Responses received to this coordination provided helpful information relevant to aspects this report.

1.5.3 DECEMBER 1999, MARINE SEAGRASS SURVEY OF THE ATLANTIC INTRACOASTAL WATERWAY, PALM BEACH COUNTY, FLORIDA.

The Jacksonville District Corps contracted the above survey and report to assess the impacts of dredging on marine seagrass habitat occurring in the Intracoastal Waterway (IWW), selected channels, and basins adjacent to the IWW in Lake Worth and Lake Worth Lagoon, Palm Beach County. The provided report documents the absence, presence, abundance, density and frequency of marine seagrass in the area and vicinity of the IWW. Specifically, the report documents the direct loss and indirect impacts on marine seagrass resources such as *Halophila johnsonii* (Johnson's seagrass), *H. decipiens* (Paddle grass), *H. wrightii* (Cuban shoal grass), and *Syringodium filiforme* (Manatee grass). Information on the occurrence and distribution of *H. johnsonii*, a 1998 Federally listed threatened marine plant, in the vicinity of the federal channel was of paramount importance. Information from this report has been included as relevant to impacts associated with the action proposed on Peanut Island and Palm Beach Harbor.

1.5.4 SEPTEMBER 2000, SECTION 1135, ENVIRONMENTAL RESTORATION REPORT WITH EA, JOHNS ISLAND, PALM BEACH COUNTY, FLORIDA.

The Jacksonville District Corps in conjunction with the Palm Beach County and the Florida Inland Navigation District propose environmental restoration of Johns Island to include, removal of exotic vegetation, stockpiled dredged material, and planting of indigenous plant species. Coordination was completed under Section 7 of the Endangered Species Act, Fish and Wildlife Coordination Act and other mandated acts were also included in the report. Relevant information from this EA was helpful in the preparation of this report.

1.5.5 OCTOBER 1996, COAST OF FLORIDA EROSION AND STORM EFFECTS STUDY, REGION III, with FINAL EIS, PALM BEACH, BROWARD, and DADE COUNTIES

This report summarize beach erosion and storm damage problems on the Atlantic Ocean shoreline of the lower southeast coast of Florida, over 88 miles within Palm Beach, Broward and Dade counties. Results from planning, engineering, environmental, economic, and real estate studies were incorporated into the report that seeks to recommend effective management and support of the coastal region in a comprehensive manner.

1.5.6 SECTION 205, ENVIRONMENTAL IMPACT STATEMENT, CANAL 51 (C-51), PALM BEACH COUNTY, FLORIDA.

The project area is located in Palm Beach County and runs east /west from Water Conservation Area Number One (Loxahatchee National Wildlife Refuge) to West Palm Beach at Lake Worth. The authorized project would provide 30 years of flood protection to the urbanized eastern basin and 10 years of flood protection to the western basin. This modified plan would provide water quality treatment, a reduction of damaging freshwater discharges to Lake Worth and increased water supply for the Everglades and other users. Aspects of the report provide a basis for certain information in this report as related to impacts on essential fishery habitat. Aspects of the EA as related to the elimination of a source of freshwater into the Lake Worth ecosystem and its beneficial effect on the establishment and proliferation of marine seagrasses were also incorporated into this report.

1.5.7 EARLIER NEPA DOCUMENTS.

Earlier NEPA documents and environmental reports have been completed (for this area) over the last decade. These reports are too numerous to list in this document, but to some degree are listed in the reports cited above and included by summary in this analysis where appropriate.

1.6 DECISION TO BE MADE.

Originally created in 1918 from dredged material disposal, Peanut Island has subsequently been expanded to 79 acres from the continual placement of dredged material. The island's ownership is shared by the Port of Palm Beach, Florida Inland Navigation District, Palm Beach County, and the United States Coast Guard.

The Port of Palm Beach (local sponsor) is responsible for providing a disposal site with capacity to store dredged material during maintenance dredging of Palm Beach Harbor. Dredged material storage capacity has been fully utilized with the existing stockpiled material. To provide the necessary material storage capacity, the local sponsor seeks to offload material from their dredged material storage area (DMSA) on the southern end of Peanut Island (Figure 2). Relieving this area of the existing stockpiled material would provide a cost-effective material disposal alternative during future harbor dredging operations.

This environmental assessment (EA) would evaluate the impacts proposed to threaten and endangered species from the proposed change in maintenance operations at Palm Beach Harbor and Peanut Island. Additionally, the EA would evaluate (1) the anticipated adverse impacts and beneficial values to be received from the proposed removal of exotic plants and planting of indigenous upland and wetland plant species, and (2) aesthetics benefits to be received from reconfiguring and lowering the existing DMSA containment berm from 36 feet to 32 feet above mean low water.

The EA would also evaluate and recommend the disposal option for 600,000 cubic yards of material with the least adverse environmental impacts, in addition to, being the least cost disposal alternative. Disposal alternatives under consideration include: (1) nearshore disposal south of the southern jetty contiguous to Lake Worth Inlet (Figure 4), (2) nearshore disposal at Midtown beach (Figure 5), and (3) disposal over 99-acres adjacent to the shoreline of the City of Lake Worth Municipal Golf Course and the IWW (Figure 6).

1.7 SCOPING AND REVELANT ISSUES.

1.7.1 ISSUES EVALUATED IN DETAIL.

Issues identified relevant for detailed evaluation were identified either during scoping, coordination, or by the preparers of the Environmental Assessment (see Appendix C – Pertinent Correspondence). The issues are as following:

a. Sea Turtles. The proposed change in operations at Palm Beach Harbor project is located within the nesting ranges of the threatened loggerhead sea turtle (*Caretta caretta*), the endangered green sea turtle (*Chelonia mydas*), the leatherback sea turtle (*Dermachelys coriacea*), and the hawksbill sea turtle (*Eretmochelys imbricata*). Safeguards that are routinely employed in Corps Civil Works projects to prevent adverse impacts to the listed species would be part of the project's construction plans and specifications. These measures would include a turtle observer onboard each work vessel to alert the vessel's captain/operator to the presence of sea turtles and to ensure a shut down of operations until the sea turtles leave the work area. (see Appendix C – Pertinent Correspondence, Excerpts of Manatee/Sea Turtle Protection Guidelines). Further, the project proposes no detonation of explosives in or near water. The Corps is confidence these procedures would protect the continued survival of the species and believes the project is not likely to adversely affect any endangered or threatened sea turtles.

b. West Indian manatee. The proposed change of maintenance operations in Palm Beach Harbor is located within the year-round range of the West Indian manatee (*Trichechus manatus*). Lake Worth and Lake Worth Lagoon are designated critical habitat for the manatee (50 CFR 17.95). No adverse impacts are proposed to the manatee or their critical habitat from explosive detonation or hopper dredging. The standard Corps Manatee Protection Guidelines would be included in the proposed plans and specifications. The contractor would be informed of measures to implement that ensure manatees within 100 feet of the construction area are avoided and not harmed by the project. The project's plans and specifications would include an onsite observer with ability to stop operations, if a manatee is observed within 50 of construction. Implementation of these protective measures would ensure the proposed action is not likely to adversely affect the continued survival of the manatee or adversely alter its critical habitat. (see Appendix C – Pertinent Correspondence, Excerpts of Manatee/Sea Turtle Protection Guidelines).

c. Marine Seagrass. The Corps contracted with Lotspeich and Associates, Inc. (1998), and Dial Cordy Associates, Inc. (2001), to survey marine seagrass over a three year period (from 1998 to 2001), In an effort to assess potential impacts dredging operations would have on marine seagrass in Palm Beach County, specifically the IWW within the vicinity of Palm Beach Harbor. Of particular concern was the NMFS listed threatened species *Halophila Johnsonii* (Johnson seagrass). The Florida Department of Environmental Protection (DEP) and others have also documented the occurrence and extent of seagrass from Jupiter Inlet and Hobe Sound to Lake Worth Inlet and Lagoon. Earlier surveys for submerged aquatic vegetation (Lotspeich and Associates, Inc., 1998), documented the presence of four species of seagrasses, *Halodule wrightii* (Cuban shoal grass), *Syringodium filiforme* (Manatee grass), *Thalassia testudinum* (Turtle grass), and *H. englemannii* (Star grass). This report recommended that further surveys be conducted during peak growing season to determine the presence of Johnson seagrass since substantial seagrass communities exist within the IWW and vicinity. It was also noted that Palm Beach Harbor falls within the range of the threatened species. A seagrass survey report (Dial Cordy and Associates 2001) looked at potential direct and indirect

impacts to marine seagrasses within the IWW, selected channels, and boat basins north of the Port of Palm Beach to the Palm Beach Marina south of Peanut Island. This report documents the presence of the above marine seagrass species and two additional species (i.e., *H. decipiens*, Paddle grass and *H. Johnsonii*, Johnson seagrass).

Palm Beach County Department of Environmental Resources Management (DERM) extensively mapped submerged natural resources (1999) that occur in the natural shoal areas of Lake Worth, beginning at John D MacArthur State Recreational Park (north of Peanut Island) to the Ocean Avenue Bridge (south of Peanut Island). Palm Beach DERM resources mapping also included areas of macro algal species and corrals. Two small areas of submerged resources (i.e., corals and sponges) lie east of Peanut Island within the access channel of the Lake Worth Inlet. The nearest coral-sponge resources to Peanut Island lies less than 1,000 feet from the shore with the furthest point located about 2,000 feet from the shore.

Dredging of Palm Beach Harbor has the potential to impact seagrass beds established within the channel and immediate vicinity. These impacts do not proposed any threat to *H. johnsonii* within vicinity of the channel at Peanut Island. The construction methods associated with offloading material from Peanut Island do not propose any seagrass impacts.

d. Cultural Resources. Peanut Island contains two previously recorded historical sites. Any potential Impacts to these resources were fully evaluated in the environmental assesment (EA) for Peanut Island, Section 1135, Environmental Restoration, March 2000. The Corps' archeologist and the Florida Department of State, Division of Historical Resources (DHR) determined the project would have no effect on historic property. Additionally, disposal of material adjacent to the City of Lake Worth Municipal Golf Course (LWMGC) proposes no impacts to any sites or property eligible for listing in the *National Register of Historic Places*. A no effect letter was received from the State DHR dated August 18, 2000 (see Appendix C – Pertinent Correspondence). Disposal options that propose placement of sand south of the Lake Worth Inlet southern jetty and on the shoreline of Midtown Beach propose no adverse historic or cultural resources impacts. These sites have been used in the past and disposal would be within existing footprints.

1.7.2 IMPACT MEASUREMENT.

Impacts to seagrass are based on direct impacts (i.e., area filled and area excavated) and indirect impacts (i.e., turbidity and any changes in substrate type or stability). Benefits to seagrass with filling the proposed anoxic dredged hole are dependent on water depth, clarity and substrate, sedimentation rates, salinity, currents wave energy, and tidal flushing. The following provides the means and rationale for measurement and comparison of impacts and benefits of the proposed action and alternatives. In areas where endangered or threatened species are known to occur, Corps projects are designed to avoid potential impacts to the fullest extent practicable. Further efforts are taken to avoid and minimize Impacts by ensuring the project's plans and specifications include measures which protect the continue survival of the species and prevent the unnecessary alteration of the species critical habitat. (see Appendix C – Pertinent Correspondence, Excerpts of Corps Manatee and Sea Turtle Protection Guidelines).

1.7.3 ISSUES ELIMINATED FROM DETAIL ANALYSIS.

The following issues were not considered important or relevant to the proposed action based on scoping and the professional judgment of the preparers of this Environmental Assessment.

a. Sand and rock separation. The separation of rock from sand on the island with the least cost alternative disposal option is not required. Sand stockpiled on the Port of Palm Beach DMSA contains only beach quality sand and is free of unacceptable rock size and quantities,

b. Beach Placement. The placement of beach quality material at the proposed alternative disposal options have been specifically addressed in the National Environmental Protection Act (NEPA) documents that evaluate local shore protection project for restoration of beaches from the Martin County line to the Jupiter Inlet to Lake Worth Inlet and the Boca Raton Inlet. Impacts associated with beach placement of dredged material have been addressed in EAs and Environmental Impact Statements specific to the area of impact within Palm Beach County.

c. Effects to Migratory Birds. The project helps facilitate environmental restoration efforts proposed for Peanut Island. No adverse impacts are anticipated, only environmental benefits. It's anticipated that at least 118 species of birds, including migratory, wading, and shore birds would be provided with suitable habitat.

d. Effects to mangroves. Existing mangrove habitat (3.0 acres) would receive increased flow due to removal of existing impoundments. Wetland expansion is proposed during the environmental restoration of Peanut Island as proposed under Section 1135, Environmental Restoration of Peanut Island.

1.8 PERMITS, LICENSES AND ENTITLEMENTS.

Water quality certification for the offloading of material from the southern terminus of Peanut Island is needed from the Florida Department of Environmental Protection (DEP). Certification would be obtained prior to the construction phase of the project. The Corps must also maintain consistency with the State's Coastal Zone Management Plan (CZMP). All efforts are employed by the Corps to ensure CZMP consistency to the maximum extent practicable.

State water quality certification for disposal proposed adjacent the LWMGC has been received under the permits issued to Palm Beach County. (see Appendix E – Other Actions on Peanut Island). Disposal at either of the two remaining options would require 1`Work previously performed on Peanut Island and past and current authorizations can be found in Appendix E – Other Actions on Peanut Island.

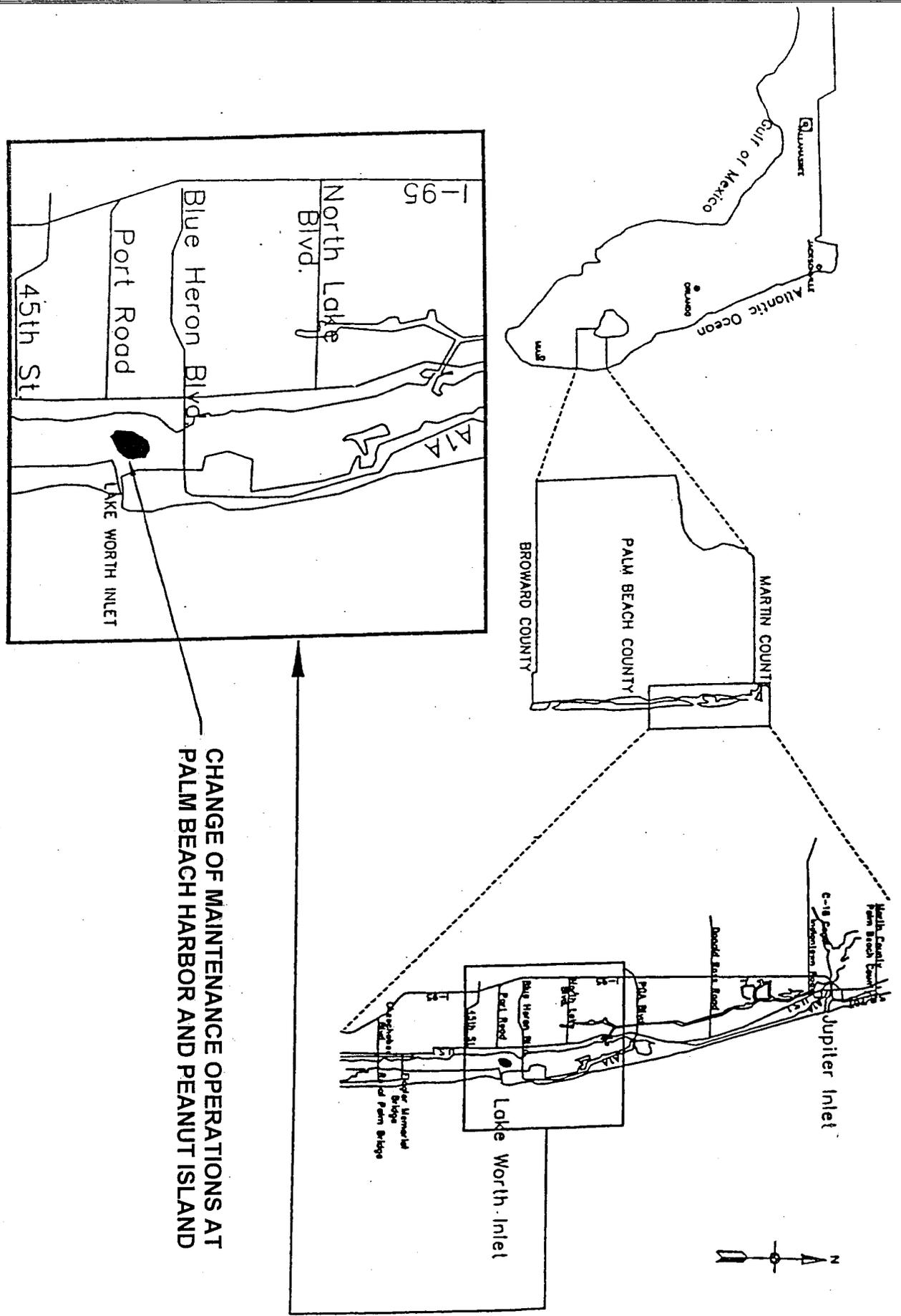
2.0 ALTERNATIVES.

2.1 INTRODUCTION.

This section offers a detail evaluation of the project alternatives' direct, indirect, cumulative, and secondary impacts upon existing resources. The information with analysis is presented in the sections under the Affected Environment. In the Probable Impacts section, the beneficial and adverse environmental effect of the alternatives are presented in comparative form to enable a clear and concise understanding of the options by the decision makers and the public.

FIGURE 1. PROJECT LOCATION MAP

FIGURE 1



CHANGE OF MAINTENANCE OPERATIONS AT
PALM BEACH HARBOR AND PEANUT ISLAND

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT
U.S. ARMY CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

PEANUT ISLAND
LOCATION MAP

8

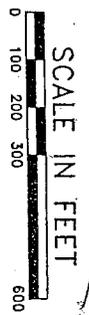
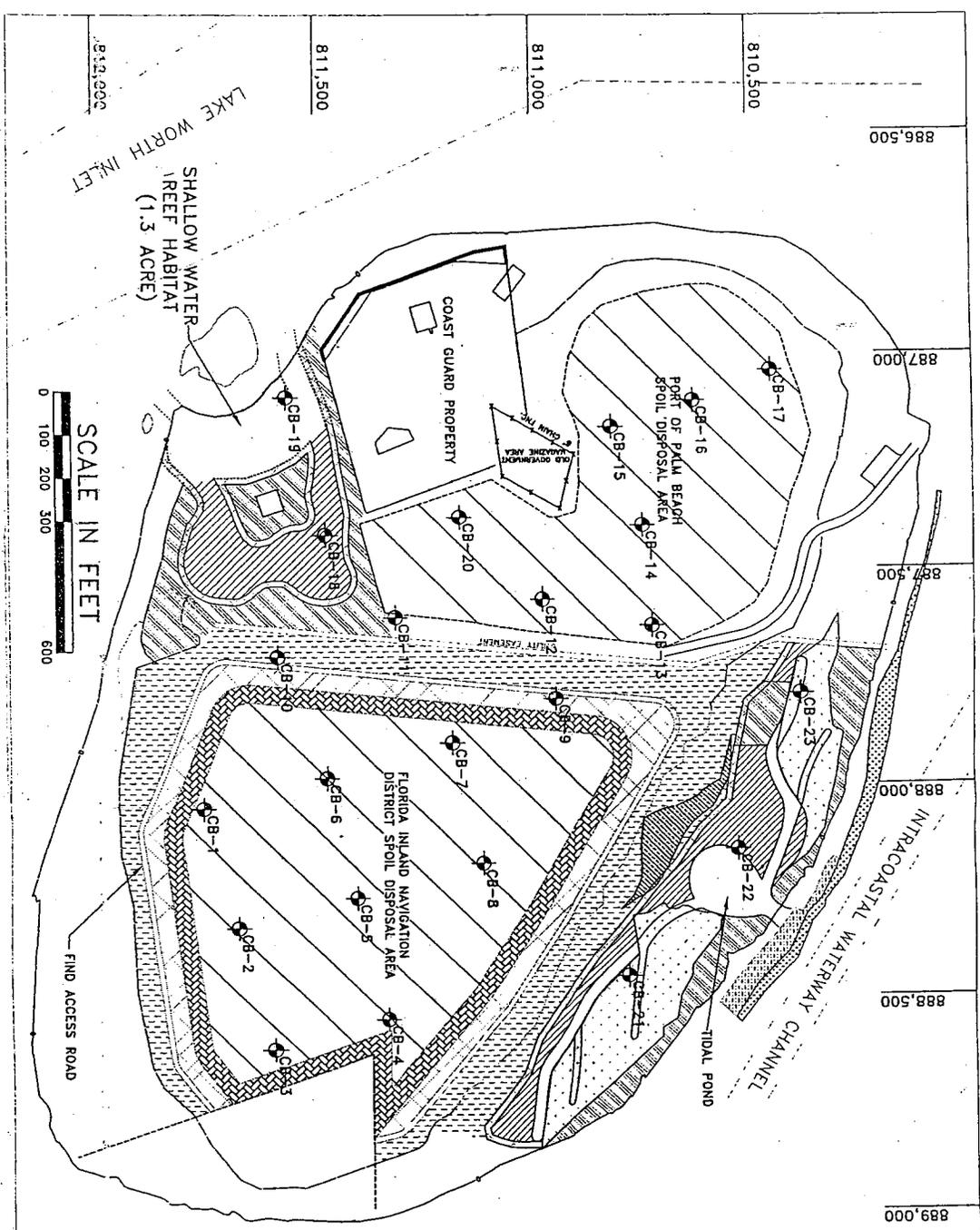
CHANGE OF MAINTENANCE
OPERATIONS AT PALM BEACH
HARBOR AND PEANUT ISLAND

FIGURE 2. PALM BEACH HARBOR DREDGED MATERIAL STORAGE AREA MAP

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

PORT OF
PALM BEACH

CHANGE OF
MAINTENANCE OPERATIONS AT
PALM BEACH HARBOR AND
PEANUT ISLAND



LEGEND	
	EXISTING MANGROVES (3.0 ACRES)
	SHALLOW WATER LAGOON (EAST 1.4 ACRES) (WEST 1.8 ACRES)
	MARITIME HAMMOCK CREATION AREA (7.1 ACRES)
	COASTAL STRAND (3.9 ACRES)
	BEACH DUNE (4.6 ACRES)
	TEMPORARY BEACH DUNE (3.3 ACRES)
	PBC PARKS FACILITIES

PALM BEACH
COUNTY PROPERTY

FIGURE 3. PORT OF PALM BEACH DIKE REHABILITATION CROSS SECTION

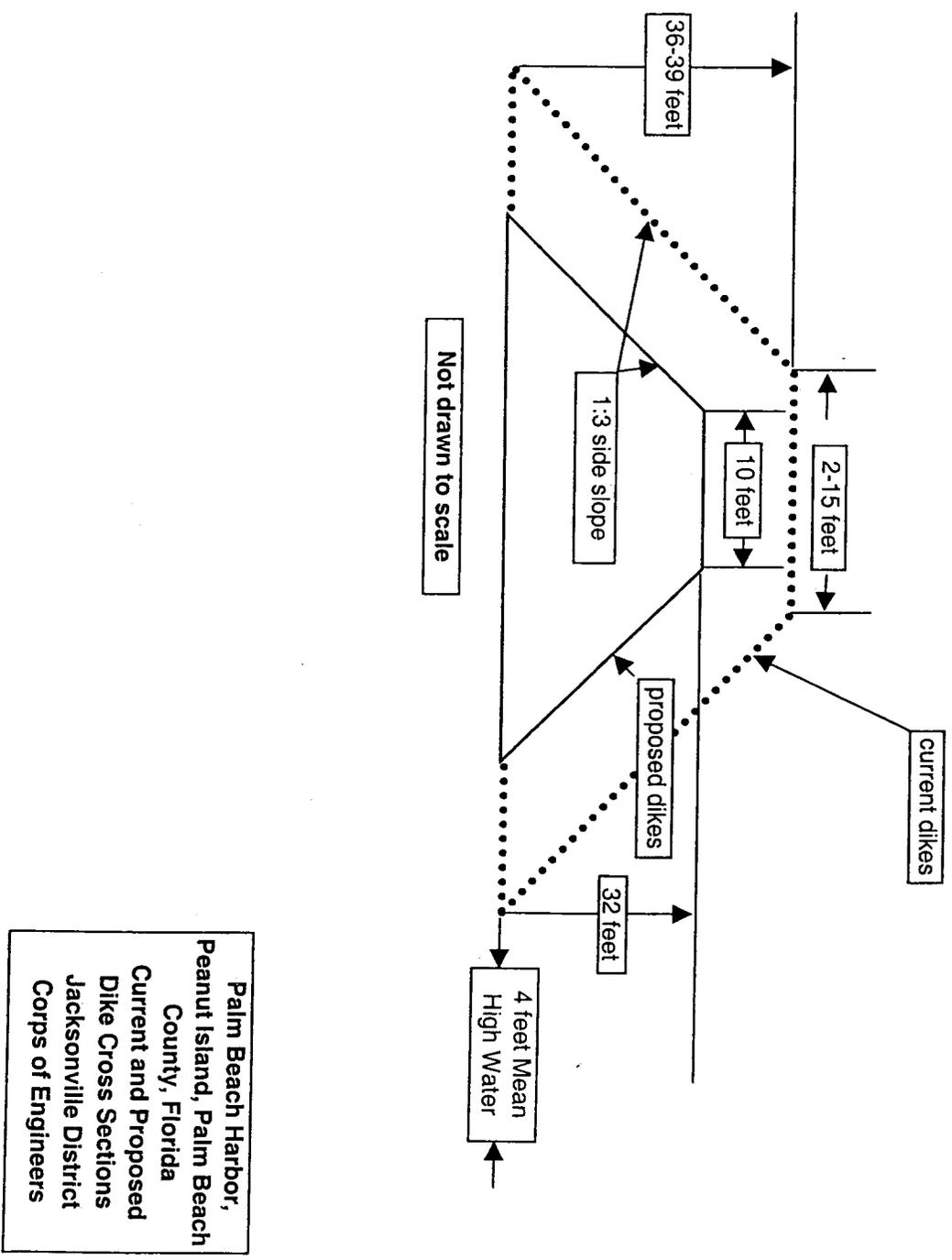


FIGURE 4. LAKE WORTH INLET SOUTH JETTY DISPOSAL ALTERNATIVE LOCATION MAP

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DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT
U.S. ARMY CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

LAKE WORTH INLET
SOUTH JETTY
DISPOSAL ALTERNATIVE

CHANGE OF MAINTENANCE
OPERATIONS AT PALM BEACH
HARBOR AND PEANUT ISLAND

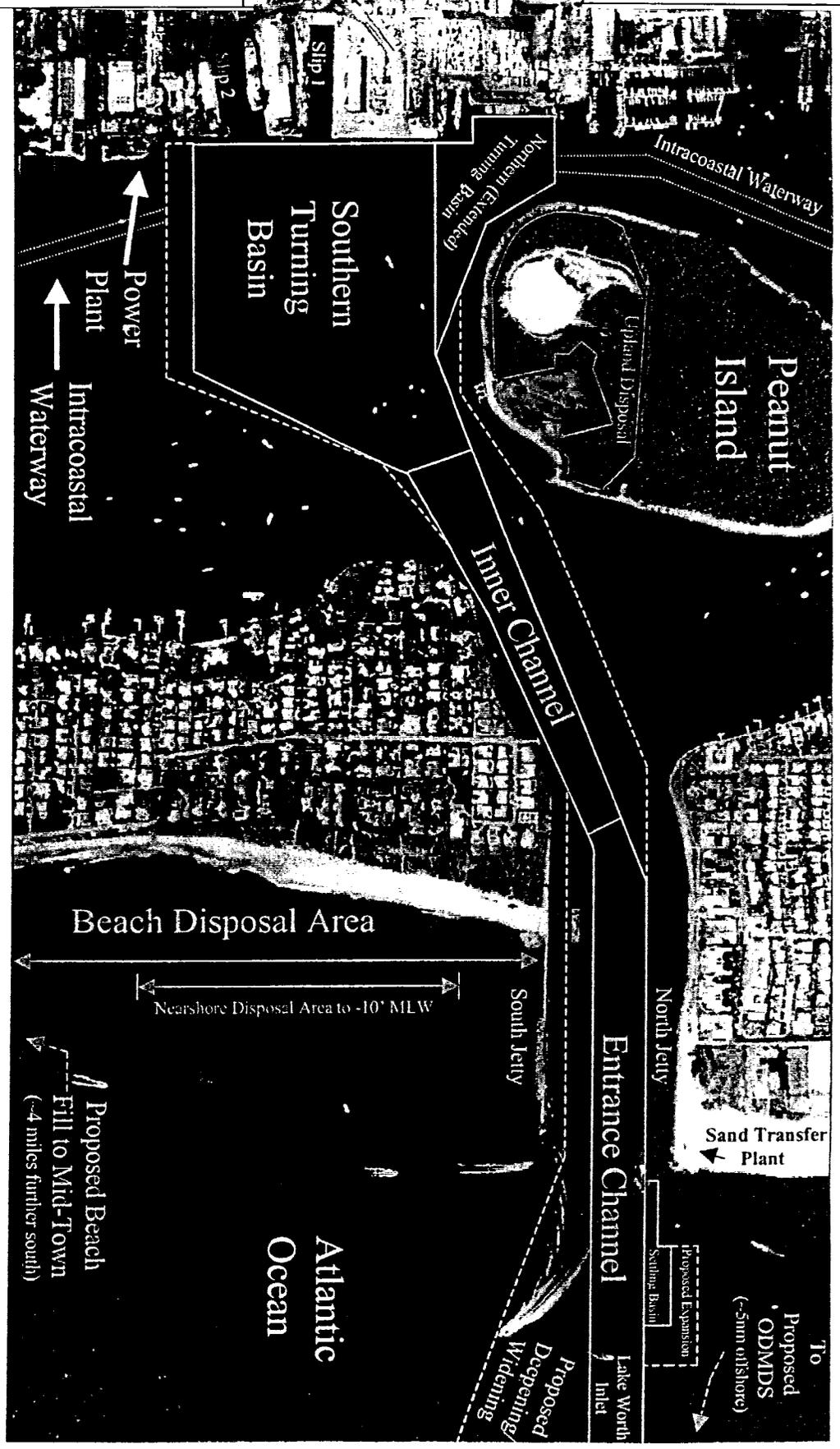


FIGURE 5. MIDTOWN BEACH DISPOSAL ALTERNATIVE LOCATION MAP



c:\old\vdgn\midtown.dgn Aug. 31, 2000 12:19:52

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT
U.S. ARMY CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

MIDTOWN BEACH
DISPOSAL SITE 12

CHANGE OF MAINTENANCE
OPERATIONS AT PALM BEACH
HARBOR AND PEANUT ISLAND

**FIGURE 6. ANOXIC HOLE DISPOSAL IN LAKE WORTH ALTERNATIVE LOCATION MAP
(LEAST COST DISPOSAL ALTERNATIVE)**

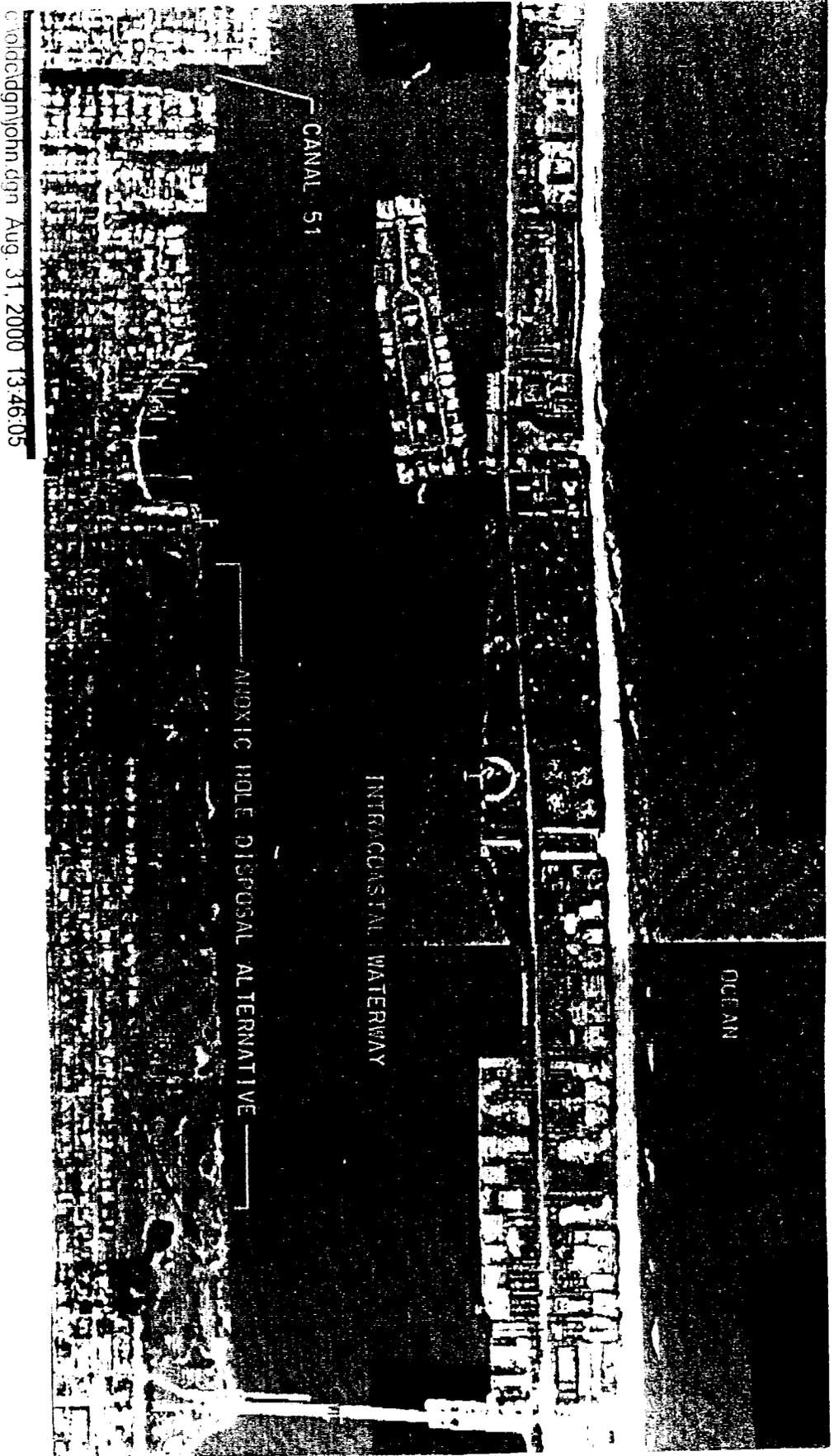
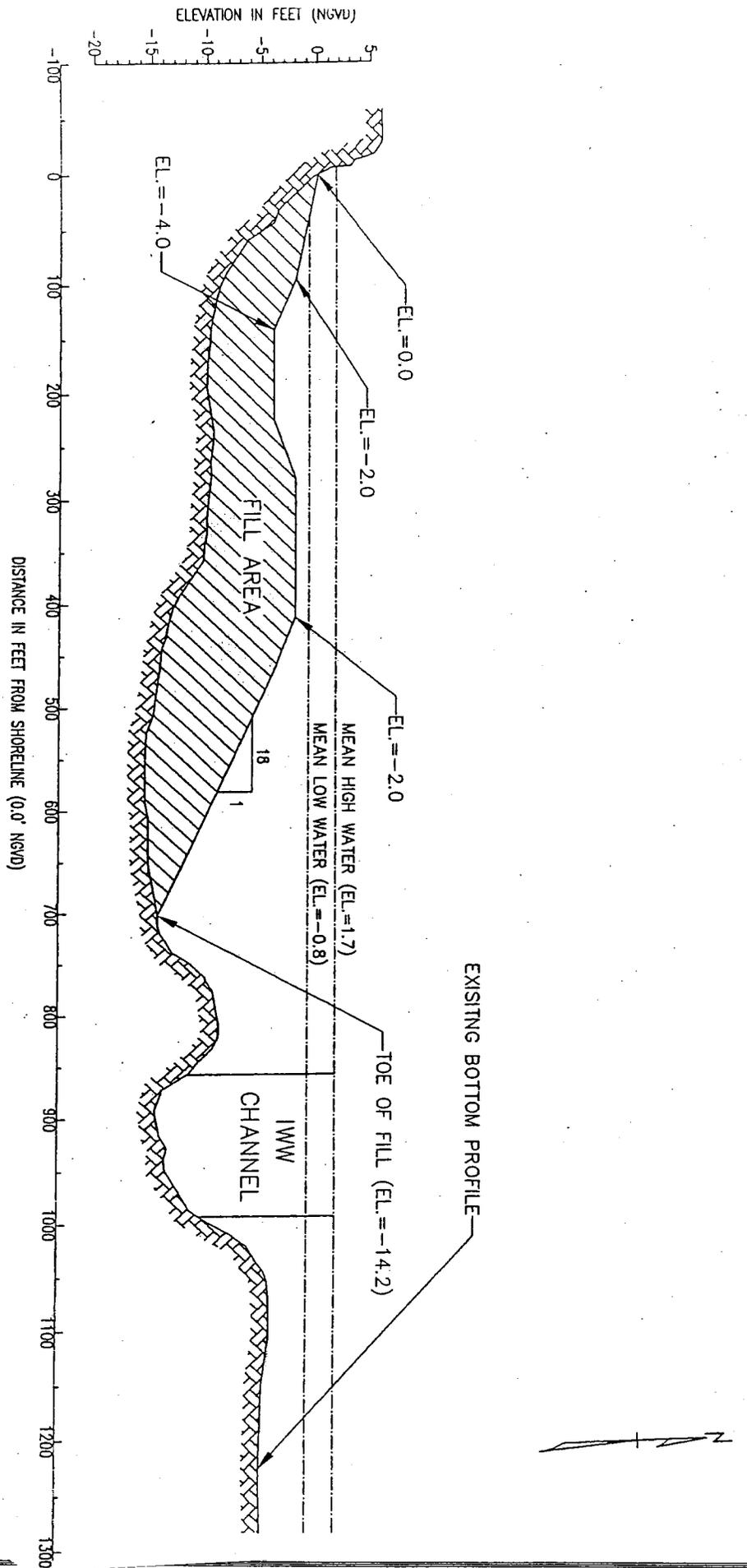


FIGURE 8. LEAST COST DISPOSAL ALTERNATIVE CROSS SECTION



SECTION "B"

NOTES:

- 1) ALL ELEVATIONS ARE IN FEET REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD).

2.2 DESCRIPTION OF THE PROPOSED ACTION.

Alternatives were formulated for the change in maintenance operations at Palm Beach Harbor and Peanut Island disposal area, Palm Beach County, Florida. Formulated alternatives include (1) changing winter hopper maintenance dredging to summer pipeline maintenance dredging, (2) offloading existing dredged material from the Palm Beach Harbor DMSA (dredged material storage area) on Peanut Island, (3) rehabilitating the Palm Beach Harbor DMSA dikes to 32 feet MLW with grassing of the slopes to stabilize, and (4) disposing of the offloaded material in one of three proposed disposal locations.

Approximately 600,000 cubic yards of stockpiled material is proposed for removal by pipeline dredge from the southern end of Peanut Island. Disposal options available with the capacity to receive the anticipated dredged volume include (1) the nearshore area south of the south jetty at the Lake Worth Inlet, (2) the Midtown Beach disposal site (Palm Beach, County), or (3) a 99-acre borrow site (anoxic hole) located adjacent to the shoreline of the LWMGC and east of the IWW channel (Figure 6, 7 & 8).

2.3 DESCRIPTION OF ALTERNATIVES.

2.3.1 NO ACTION ALTERNATIVE (STATUS QUO)

A no action alternative would preclude cost effectiveness in achieving the project's goals and objectives. A winter dredging schedule would be maintained which increases concerns for equipment and personnel from inclement weather, winds, and tidal actions. A vital portion of the environmental restoration proposed for Peanut Island under Section 1135, of the Water Resource Act of 1986, as amended, would not be performed. Less potential for adverse impact to the West Indian manatee (*Trichechus manatus*), a federally listed endangered species would occur during the summer months. Lake Worth and Lake Worth lagoon are critical habitat areas for the manatee, which confines itself to coastal waters or waterways with warm discharge during winter months. A no action alternative also prevents the offloading of stockpiled dredged material from the Port of Palm Beach DMSA. About 600,000 cubic yards of stockpiled material would remain, creating the need to transport material from the project area. Plans to use the existing beach quality sand to either nourish eroding shorelines or to create seagrass habitat (by raising-to-grade existing borrow areas) would be precluded.

2.3.2 DREDGED MATERIAL PLACEMENT AT THE NEARSHORE DISPOSAL SITE SOUTH OF THE SOUTH JETTY AT LAKE WORTH INLET.

The dredged material placement option closest to Peanut Island is south of the south jetty at Lake Worth Inlet. At this site, dredged material disposal would be completed by pipeline routed along the southern side of the Lake Worth Inlet Channel. The pipeline would deposit the dredged material on the beach area south of the south jetty. This location would accommodate the estimated 600,000 cubic yards of dredged material. Dry-loading the stockpiled material on a barge and transporting to this disposal site is another disposal option. This disposal area has been used in the past and helps to keep dredged material on the beach and within the littoral drift process (see Figure 4). Disposal would be within the existing template and/or footprint of previous authorizations. This alternative would possibly require precautions to avoid impacts to nesting sea turtles.

2.3.3 DREDGED MATERIAL PLACEMENT AT THE MIDTOWN BEACH DISPOSAL SITE.

This dredged placement alternative has been used in the past and would accommodate the estimated 600,000 cubic yards of material to be offloaded from the Port of Palm Beach DMSA on Peanut Island. The Midtown Beach disposal site begins south of the Breakers Hotel and continues south for approximately two and a quarter miles. Disposal for this alternative would

be completed by pipeline routed along the IWW with an easterly bearing along the south property line of the Breakers Golf Course. Three bore and jackings on Palm Beach would be necessary for this alternative. This dredged material disposal alternative would place the material on the beach within the littoral drift and within the existing authorized template or footprint (Figure 5). This alternative would also require precautions to avoid impacts to nesting sea turtles.

2.3.4 DREDGED MATERIAL PLACEMENT AT THE LAKE WORTH DISPOSAL AREA (LEAST COST ALTERNATIVE).

The stockpiled material would be dry offloaded from the Port of Palm Beach DMSA onto barges for transport to an anoxic hole (Figure 6), located adjacent to the City of Lake Worth Municipal Golf Course shoreline. Bearing southerly along the IWW, the material would be placed over 99 acres of anoxic hole or tidal marine borrow site. This alternative is the more cost effective dredged material disposal alternative. In that, the area could easily accommodate the 600,000 cubic yards of material. The bottom or benthic elevation of the area would be raised to a grade which support the recruitment of marine seagrass. This alternative would assist Palm Beach County and their co-partner the Town of Palm Beach in their endeavor to provide environmental restoration adjacent to the City of Lake Worth municipal golf course. (Figures 7 & 8).

2.4 COMPARISON OF ALTERNATIVES.

Table 1 lists alternatives considered and summarizes the major features and consequences of the proposed action and alternatives. For a more detailed discussion of impacts of alternative, see Section 4.0.

2.5 MITIGATION.

Offloading and disposal of material from Peanut Island should have no adverse impacts to emergent or submerged aquatic resources. The proposed action would employ "Best Management Practices" to ensure resources within the project's scope are avoided and protected to the fullest extent possible. Mitigation is not required to offset or compensate any adverse environment impacts. However, material disposal adjacent to the LWMGC has the potential to support the recruitment of approximately 57 acres of submerged aquatic vegetation.

3.0 AFFECTED ENVIRONMENT

The affected environment section succinctly describes the existing environmental resources of the areas that would be affected, if any of the alternatives were implemented. This section also describes only those environmental resources that are relevant to the decision to be made. The entire environmental conditions are not discussed. A more detailed analysis and evaluation has been performed in Section 1135, the Environmental Restoration of Peanut Island. Only environmental resources that would be directly affected by disposal alternatives, if the alternatives were implemented have been described. This section, in conjunction with the description of the "no-action" alternative forms the baseline conditions for determining the environmental impacts of the proposed action and reasonable alternatives.

3.1 GENERAL ENVIRONMENTAL SETTING

The proposed project area is located in United States Climatic Zone 10 (Tropical Climate). Palm Beach County and the Intracoastal Waterway (IWW) form the eastern boundary of the site with Lake Worth Lagoon forming the southern boundary. Lake Worth Lagoon is a State of Florida designated Class III waters (recreational waterbody) and critical habitat for the West Indian manatee.